V. POLICY OPTIONS

In our view, the obvious implication of the foregoing analysis is that these markets should be subject to close observation and oversight. Unfortunately, they have been treated in the opposite manner, exempt from scrutiny. Instead of more oversight, they have been subject to less. Policymakers in Washington, who have primary responsibility for this interstate market, have failed to do much about the run up in prices. In fact, over the years they have done a number of things to make matters worse. In the face of the Enron-led trading scandals, their reaction seems to have been to rush to let more traders do more things in unregulated financial markets.

There has been a failure of public policy at every level to build a system that protects the public. The structure of the physical markets induces conduct that has created and is sustaining a tight market. The structure of the financial commodities markets induces conduct that magnifies upward pressures on prices. To say that there is more than enough blame to go around is an understatement. It may well be that the physical markets and financial markets are equally at fault and that institutional structures and conduct in each of the markets share the blame. If the physical market were not so tight, things would not be as bad as they are in the financial commodity markets, but that is not to say they would be good. If the financial markets worked better, prices would not spiral so forcefully, but there still would be upward pressures emanating from the physical market. Reforming one set of markets without addressing the other may leave consumers inadequately protected.

A. Recent Studies of Natural Gas Financial Markets

The Federal Energy Regulatory Commission[1] and the Commodity futures Trading Commission[2] have both issued reports in the past few weeks that conclude that there has been no market manipulation, while the Government Accountability Office is reserving judgment.[3] These studies have no laid the concerns to rest for a number of reasons.

Studies by the CFTC and the Government Accountability Office "can't assure the public that the over-the-counter market isn't being manipulated."[4] Even where the trading is regulated and regulators have taken a peak at what is going on, questions persist. "Studies by the New York Mercantile Exchange and the Commodity Futures Trading Commission have disputed the notion that hedge funds are having undue influence on pricing or volatility... [M]any traders scoffed at the studies, saying that they focused only on certain months, missing price run-ups."[5]

- The studies do not deal with a period in which there was a rapid run up in prices. It does appear that if you study the wrong months in the wrong markets, you will not learn very much.[6]

- The Commission does not have the data necessary to uncover many of the effects that are a concern.

- Blatant manipulation is not the only issue; the concern is a much broader range of behaviors and structural effects.

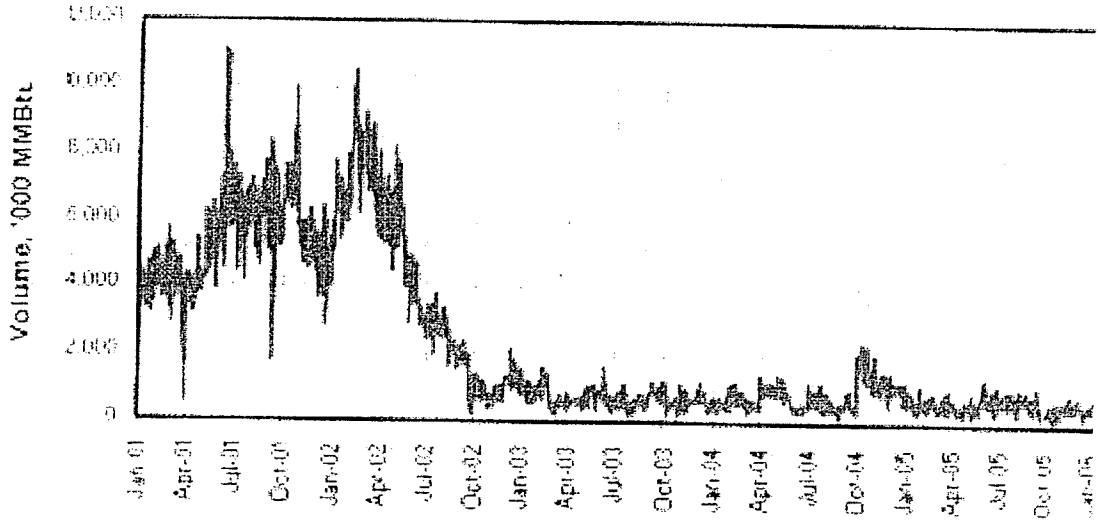
- The claim that the market is efficient is refuted by the detailed academic studies. The opinion about the efficiency of the natural gas market varies across time.[7]

- The assertion that the market provides liquidity and price discovery is in dispute. Out beyond a couple of months there is very little liquidity on the exchanges subject to CFTC jurisdiction.

Efforts to ensure the accuracy of prices in the over-the-counter market have been equally unsatisfying. The indices on which many contracts rely are privately compiled reports of transactions. This reporting was entirely voluntary and unaudited. Misreporting was uncovered and the Federal Energy Regulatory Commission considered reform. It chose to suggest a code of conduct. Reporting remains voluntary and unaudited. Those reporting must merely attest to the veracity of the reported transactions they choose to report.

When the spotlight was first turned on the construction of the survey, many firms ceased reporting their transactions. Now that the process has been reformed, the amount of reporting remains extremely low (see Exhibit V-1). The quantity of reported transactions are

EXHIBIT III-4: GAS DAILY HENRY HUB VOLUME



Source: Gas Daily.

an extremely small fraction of the total gas consumed in the country – one to two percent. While there are other indices and one need not assume that gas should be transacted in this cash market to be consumed, the fact that such a small quantity of gas plays such an important role in price setting is a concern. This is particularly the case where the reported transactions are self-selected. A recent study by the Government Accountability Office gave the reporting system a grade of C (70 percent), with a substantial minority continuing to express concern about the functioning of the reporting system.

B. Recent Changes in Natural Gas Financial Market Oversight

The FERC has also issued rules implementing the Energy Policy Act of 2005 that change its market monitoring procedures and implement new powers granted in the Act.[8] It has entered into a vague memorandum of understanding about sharing information.[9] The foregoing analysis demonstrates that a lot more than manipulation is at issue in the natural gas price spiral and suggests that much more needs to be done. Both the FERC and the CFTC are looking for a very narrow range of manipulative behaviors with a very narrow telescope. Unlike other physical commodities, a vast amount of trading of natural gas goes on in the over-the-counter markets that are hidden from the view and beyond the authority of these agencies. The indices that are based on this unregulated market activity have been unreliable and remain subject to doubt.

In the case of regulated activities the changes at the FERC replicate the weaknesses of the CFTC approach by adopting its definitions and case law. It may be illegal to contrive to manipulate markets and there are new fines if you are caught doing so, but the FERC is going to have great difficulty proving manipulation, when prices are "moved." It is precisely for this reason that the CFTC and the exchanges subject to its jurisdiction do more than rely on narrowly defined manipulation statutes to prevent abuse.

As noted above exchanges adopt additional measures to limit the ability to move prices – like position limits and price change limits. Unfortunately, for natural gas, these remain far too lax. FERC has no authority to implement effective trading limits and the CFTC has chosen not to do so.

Reform of natural gas trading has become a focal point of debate in legislation to reauthorize the Commodity Futures Trading Commission. The traders are resisting any new oversight or authority. A weak set of reforms was passed in the House, while the Senate continues to debate the issue. The foregoing analysis suggests that the original proposals introduced in the House are what it needed to protect the public from wildly gyrating natural gas prices.

In the financial markets, speculators have been quick to seize the opportunity to push prices up. The structure of the market gives them ample opportunity to do so. The financial markets compound the problem because they are structured in such a way that a large number

of small buyers who have weakened incentives and limited ability to resist price increases face a small number of large sellers who have a strong incentive and a much greater ability to hold out for higher prices. Holding out in the supply side may simply mean buying and holding assets in the ground or positions in the futures market and waiting for buyers who need the commodity to blink.

Most troubling is the fact that many of the impacts of many of the legislative and regulatory policies that have worked to the detriment of consumers were predictable and preventable, given the nature of the commodity and the type of market that Congress and the regulatory agencies in Washington created. After a half dozen years of turmoil in natural gas markets, we still have a lot more questions than answers.

Unlike bankers and brokers in organized markets, traders in the over-the-counter market do not have to register or demonstrate their competence or good character. They do not have to report their holdings or positions in markets. They can buy and sell this vital commodity with little capital or collateral to back up their promises. In organized exchanges, where traders do have to register, report and show financial and managerial competence, the rules are too lax. The holdings a large player can amass are huge. The period in which prices are set is short. Selected players have preferential access to important parts of the market.

Market rules should discourage unproductive trading and be particularly on guard at moments of vulnerability. This can be accomplished by establishing reasonable limits on positions and ensuring that settlement periods are liquid and long. Vigorous oversight and stiff punishment of manipulation should be meted out swiftly. These steps are so basic and obvious it is hard to understand why they have not been implemented, but they have not.

C. Oversight of the Unregulated Over-the-Counter Markets is Needed

Doing nothing is not an option. At a minimum the public deserves an intensive examination of every aspect of the natural gas market. Such an examination would suggest that more authority be vested in responsible institutions because the vast majority of natural gas transactions are beyond regulatory jurisdiction.

Such an examination should not be a one-time undertaking. The stakes are simply too high in the natural gas market. The instances of "wacky" behavior are too frequent to ignore—the market must be subject to scrutiny. Ongoing scrutiny would require that traders in all natural gas markets register and report. Traders should be competent, honest people. They should be required to register, like bankers do. They should have the resources to meet their commitments and stand behind their trades, as bankers are required to. Regulators should be able to see all markets so they can detect efforts to move any individual market, which means large transactions and positions should be reported.

If we go back to the ways the market can be gamed, legally and illegally, to the detriment of consumers, policy solutions immediately present themselves. Above all,

oversight should apply to all markets. The opaqueness created by the presence of completely unregulated traders should be eliminated.

The claim that the cost of registering and reporting would be unduly burdensome[10] fail to take account of the huge burden that natural gas prices have placed on consumers and the huge flow of profits that could be (1) used by the companies to comply and (2) provide a base for fees to fund the necessary studies. Indeed, what you end up doing, purposeful or otherwise, is misleading decision makers.

D. Basic Consumer Protections for Natural Gas Trading

Simply monitoring activities may not be sufficient to ensure that natural gas markets operate efficiently and equitably. The nature of the underlying commodity is such that it is especially vulnerable. Policies can be structured to avoid trading abuses. The objective is to diminish the ability to move the market at key moments.

Position limits make it difficult to control a sufficient quantity of the commodity to influence the price. Lengthening the settlement period, to which many contracts are indexed, ensures that more transactions will be included in setting the price that consumers pay. Preferential access to trading markets should not be allowed, as this gives an advantage to speculators.

Trading breaks are another approach to dampening volatility. These include limitations on the magnitude of price changes or shutting down trading during emergencies. It is remarkable that, on a percentage basis, natural gas prices are allowed larger swings than many other commodities that have much less troubling characteristics.

The repeated pattern of abuse in these markets makes it clear that past actions have been inadequate to eliminate anti-consumer behaviors. Clearer definitions of unacceptable behavior are needed with stiffer penalties for abuse. By subjecting all markets to oversight and registration, the ability of abusers to migrate from regulated to unregulated markets will be eliminated.

E. State Regulatory Issues

The role of state policy in these aspects of the industry is limited. State policy deals with the end-user markets, the local distribution utilities. It is difficult to change the system from the buying end, where the primary constraint is to make sure consumers have gas to heat their homes. States could force the above reforms by requiring their utilities to deal only with traders who are subject to oversight – who register, report and are audited.

States can also encourage utilities to be more aggressive in holding costs down, but the challenge is to find approaches that do so without exposing consumers to excessive risk.

F. Physical Market Issues

In the physical market, policymakers have allowed the supply side to become concentrated and vulnerable to the exercise of market power. Meanwhile, producers have been slow to invest in exploration and development, compounding the problem of tight supplies.

The Federal Energy Regulatory Commission exacerbated the problem by failing to ensure a transparent price reporting mechanism. It deregulated markets and granted market–based rate authority without requiring full and honest disclosure of information or effective competition on the ground. In retrospect, it appears that there have been repeated market "aberrations," but fraud and market manipulation are not the only concerns. The ability of strategic behavior to influence price because of structural weaknesses in market rules is a more general concern.

The position of the major oil companies with large holdings of natural gas physical assets, dominance of natural gas marketing, and active involvement in natural gas financial markets poses a serious threat to consumers. The inadequate investment in exploration over the course of a decade or more contributed to the tight supply conditions. The massive windfall of cash flow in recent years dulls the incentive for the majors to supply gas to the market. They can keep it in the ground and hold out for higher prices. They are under no pressure to sign long-term contracts, except at extremely high prices. As major marketers and traders, they can move markets.

The fact that the majors straddle these markets, several of which are lightly or unregulated, compounds the problem, since their ability to profit by taking contrary positions in various markets is hidden from regulators. Policymakers must have the information necessary to make informed judgments about whether the major oil companies are exercising market power, strategically in the long-term and unfairly exploiting the tight markets they have helped to create in the short term.

A joint task force of federal and state anti-trust and regulatory authorities should be formed to examine:

(1) the regional concentration of natural gas supplies because the nation is not a single market and national concentration ratios are misleading;

(2) the behavior of the majors as marketers;

(3) actions of the major oil companies across all of the markets in which they are involved B physical as marketers, over-the-counter and in exchanges as traders.

ENDNOTES

[1] FERC, The Basics.
[2] Haigh, Michael S., Jana Hranaiova and James Overdahl, "Price Dynamices, Price Discovery and Large Futures Trader Interactions in the Energy Complex," Commodity Futers Trading Commisison, April 28, 2005; see also New York Mercantile Exchange, *a Review of Recent Hedge Fund Participation in NYMEX Natural Gas and Crude Oil Futures Markets.* March 1. 2005.
[3] Platts. *Gas Daily,* February 14, 2006, ran the headline "GAO Hints at Post-Katrina Price Tampering." Reflecting the statement that "other factors – such as market manipulation – may have affected wholesale prices." The report (*Natural Gas: Factors Affecting Prices and Potential Impact on Consumers,* February 13, 2006) focuses on tight physical markets.
[4] Barrionuevo, "Energy Trading," p. 3-3.
[5] Barrioneuvo, "Energy Trading," p. 3-3.
[6] Uria, Rocio and Jeffrey Williams, *The "Supply-of-Storage" for Natural Gas in California,* University of California Energy Institute, September 2005.
[7] See Herbert, John H., "The Relation of Monthly Spot to Futures Prices of Natural Gas," *Energy,* 18: 1993; De Vany, Arthur and David W. Walls, "The Law of One Price in a Network: Arbitrage and Price Dynamics in Natural Gas City Gate Markets," *Journal of Regional Science,* 36: 1996.
[8] Federal Energy Regulatory Commission, Order No. 670, Prohibition of Energy Market Manipulation, Docket No. RM06-3-000, January 19, 2006.
[9] Memorandum of Understanding Between The Feeralenergy Regulatory Commission and the Commodity Futures Tradigin Commission Regarding Iformatoi Sharing and Treatment of Proprietary Trading and Other Information, October 12, 2005.
[10] *Address of Sharon Brown-Hruska,* UBS Global Oil and Gas Conference, June 3, 2004.

GLOSSARY

(Source: Commodity Futures Trading Commission and the Energy Information Administration)

Actuals: The physical or cash commodity, as distinguished from a futures contract. See Cash and Spot Commodity.

Allowances: The discounts (premiums) allowed for grades or locations of a commodity lower (higher) than the par (or basis) grade or location specified in the futures contract. See Differentials.

Approved Delivery Facility: Any bank, stockyard, mill, storehouse, plant, elevator, or other depository that is authorized by an exchange for the delivery of commodities tendered on futures contracts.

Arbitrage: A strategy involving the simultaneous purchase and sale of identical or equivalent commodity futures contracts or other instruments across two or more markets in order to benefit from a discrepancy in their price relationship. In a theoretical efficient market, there is a lack of opportunity for profitable arbitrage. See Spread.

Artificial Price: A futures price that has been affected by a manipulation and is thus higher or lower than it would have been if it reflected the forces of supply and demand.

Back Months: Futures delivery months other than the spot or front month (also called deferred months).

Backwardation:Market situation in which futures prices are progressively lower in the distant delivery months. For instance, if the gold quotation for January is $360.00 per ounce and that for June is $355.00 per ounce, the backwardation for five months against January is $5.00 per ounce. (Backwardation is the opposite of contango). See Inverted Market.

Barrel: A unit of volume equal to 42 U.S. gallons.

Basis:The difference between the spot or cash price of a commodity and the price of the nearest futures contract for the same or a related commodity. Basis is usually computed in relation to the futures contract next to expire and may reflect different time periods, product forms, grades , or locations.

Basis Grade: The grade of a commodity used as the standard or par grade of a futures contract.

Basis Point: The measurement of a change in the yield of a debt security. One basis point equals 1/100 of one percent.

Basis Quote: Offer or sale of a cash commodity in terms of the difference above or below a futures price (e.g., 10 cents over December corn).

Basis Risk: The risk associated with an unexpected widening or narrowing of basis between the time a hedge position is established and the time that it is lifted.

Basis Swap: A swap whose cash settlement price is calculated based on the basis between a futures contract and the spot price of the underlying commodity or a closely related commodity on a specified date.

bbl: The abbreviation for barrel(s).

bbl/d: The abbreviation for barrel(s) per day.

bbl/sd: The abbreviation for barrel(s) per stream day

bcf: The abbreviation for billion cubic feet.

Bear:One who expects a decline in prices. The opposite of a bull. A news item is considered bearish if it is expected to result in lower prices.

Bear Market: A market in which prices generally are declining over a period of months or years. Opposite of Bull Market.

Bear Market Rally: A temporary rise in prices during a bear market. See Correction.

Beta (Beta Coefficient): A measure of the variability of rate of return or value of a stock or portfolio compared to that of the overall market, typically used as a measure of riskiness.

Bid:An offer to buy a specific quantity of a commodity at a stated price.

Break:A rapid and sharp price decline.

Broad-Based Security Index: Any index of securities that does not meet the legal definition of Narrow-Based Security Index.

Broker:A person paid a fee or commission for executing buy or sell orders for a customer. In commodity futures trading, the term may refer to: (1) Floor Broker — a person who actually executes orders on the trading floor of an exchange; (2) Account Executive or Associated Person — the person who deals with customers in the offices of Futures Commission Merchants; or (3) the Futures Commission Merchant.

British thermal unit: The quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit).

Btu: The abbreviation for British thermal unit(s).

Btu conversion factors: Btu conversion factors for site energy are as follows:
Electricity ..... 3,412 Btu/kilowatthour
Natural Gas ..... 1,031 Btu/cubic foot
Fuel Oil No.1 ..... 135,000 Btu/gallon
Kerosene ..... 135,000 Btu/gallon
Fuel Oil No.2 ..... 138,690 Btu/gallon
LPG (Propane) ..... 91,330 Btu/gallon
Wood ..... 20 million Btu/cord

Btu per cubic foot: The total heating value, expressed in Btu, produced by the combustion, at constant pressure, of the amount of the gas that would occupy a volume of 1 cubic foot at a temperature of 60 degrees F if saturated with water vapor and under a pressure equivalent to that of 30 inches of mercury at 32 degrees F and under standard gravitational force (980.665 cm. per sec. squared) with air of the same temperature and pressure as the gas, when the products of combustion are cooled to the initial temperature of gas and air when the water formed by combustion is condensed to the liquid state. (Sometimes called gross heating value or total heating value.)

Bucketing:Directly or indirectly taking the opposite side of a customer's order into a broker's own account or into an account in which a broker has an interest, without open and competitive execution of the order on an exchange. Also called "trading against."

Bucket Shop: A brokerage enterprise that "books" (i.e., takes the opposite side of) retail customer orders without actually having them executed on an exchange.

Bull:One who expects a rise in prices. The opposite of bear. A news item is considered bullish if it is expected to result in higher prices.

Bull Market: A market in which prices generally are rising over a period of months or years. Opposite of Bear Market.

Buyer:A market participant who takes a long futures position or buys an option. An option buyer is also called a taker, holder, or owner.

Buyer's Call: A purchase of a specified quantity of a specific grade of a commodity at a fixed number of points above or below a specified delivery month futures price with the buyer allowed a period of time to fix the price either by purchasing a futures contract for the account of the seller or telling the seller when he wishes to fix the price. See Seller's Call.

Buying Hedge (or Long Hedge): Hedging transaction in which futures contracts are bought to protect against possible increases in the cost of commodities. See Hedging.

Call: (1) An option contract giving the buyer the right but not the obligation to purchase a commodity or other asset or to enter into a long futures position; (2) a period at the opening and the close of some futures markets in which the price for each futures contract is established by auction; or (3) the requirement that a financial instrument be returned to the issuer prior to maturity, with principal and accrued interest paid off upon return. See Buyer's Call, Seller's Call.

Carrying Charges: Cost of storing a physical commodity or holding a financial instrument over a period of time. These charges include insurance, storage, and interest on the deposited funds, as well as other incidental costs. It is a carrying charge market when there are higher futures prices for each successive contract maturity. If the carrying charge is adequate to reimburse the holder, it is called a "full charge." See Negative Carry, Positive Carry, and Contango.

Cash Commodity: The physical or actual commodity as distinguished from the futures contract, sometimes called Spot Commodity or Actuals.

Cash Forward Sale: See Forward Contract.

Cash Market: The market for the cash commodity (as contrasted to a futures contract) taking the form of: (1) an organized, self-regulated central market (e.g., a commodity exchange); (2) a decentralized over-the-counter market; or (3) a local organization, such as a grain elevator or meat processor, which provides a market for a small region.

Cash Price: The price in the marketplace for actual cash or spot commodities to be delivered via customary market channels.

Cash Settlement: A method of settling certain futures or option contracts whereby the seller (or short) pays the buyer (or long) the cash value of the commodity traded according to a procedure specified in the contract. Also called Financial Settlement, especially in energy derivatives.

CEA: Commodity Exchange Act or Commodity Exchange Authority.

CFTC: See Commodity Futures Trading Commission.

Churning: Excessive trading of a discretionary account by a person with control over the account for the purpose of generating commissions while disregarding the interests of the customer.

Circuit Breakers: A system of coordinated trading halts and/or price limits on equity markets and equity derivative markets designed to provide a cooling-off period during large, intraday market declines. The first known use of the term circuit breaker in this context was in the Report of the Presidential Task Force on Market Mechanisms (January 1988), which recommended that circuit breakers be adopted following the market break of October 1987.

Citygate: A point or measuring station at which a distributing gas utility receives gas from a natural gas pipeline company or transmission system.

Clearing: The procedure through which the clearing organization becomes the buyer to each seller of a futures contract or other derivative, and the seller to each buyer for clearing members.

Close: The exchange-designated period at the end of the trading session during which all transactions are considered made "at the close." See Call.

Closing-Out: Liquidating an existing long or short futures or option position with an equal and opposite transaction. Also known as Offset.

Closing Price (or Range): The price (or price range) recorded during trading that takes place in the final period of a trading session's activity that is officially designated as the "close."

Commercial: An entity involved in the production, processing, or merchandising of a commodity.

Commitments: See Open Interest.

Commodity: A commodity, as defined in the Commodity Exchange Act, includes the agricultural commodities enumerated in Section 1a(4) of the Commodity Exchange Act and all other goods and articles, except onions as provided in Public Law 85-839 (7 U.S.C. § 13-1), a 1958 law that banned futures trading in onions, and all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in.

Commodity Exchange Act: The Commodity Exchange Act, 7 U.S.C. § 1, et seq., provides for the federal regulation of commodity futures and options trading. See Commodity Futures Modernization Act.

Commodity Exchange Commission: A commission consisting of the Secretary of Agriculture, Secretary of Commerce, and the Attorney General, responsible for administering the Commodity Exchange Act prior to 1975.

Commodity Futures Modernization Act: The Commodity Futures Modernization Act of 2000 (CFMA), Pub. L. No. 106-554, 114 Stat. 2763, reauthorized the Commodity Futures Trading Commission for five years and overhauled the Commodity Exchange Act to create a flexible structure for the regulation of futures and options trading. Significantly, the CFMA codified an agreement between the CFTC and the Securities and Exchange Commission to repeal the 18-year-old ban on the trading of single stock futures.

Commodity Futures Trading Commission (CFTC): The Federal regulatory agency established by the Commodity Futures Trading Act of 1974 to administer the Commodity Exchange Act.

Commodity Option: An option on a commodity or a futures contract.

Congestion: (1) A market situation in which shorts attempting to cover their positions are unable to find an adequate supply of contracts provided by longs willing to liquidate or by new sellers willing to enter the market, except at sharply higher prices (see Squeeze, Corner); (2) in technical analysis, a period of time characterized by repetitious and limited price fluctuations.

Contango: Market situation in which prices in succeeding delivery months are progressively higher than in the nearest delivery month; the opposite of backwardation.

Contract: (1) A term of reference describing a unit of trading for a commodity future or option; (2) an agreement to buy or sell a specified commodity, detailing the amount and grade of the product and the date on which the contract will mature and become deliverable.

Contract Grades: Those grades of a commodity that have been officially approved by an exchange as deliverable in settlement of a futures contract.

Contract Market: A board of trade or exchange designated by the Commodity Futures Trading Commission to trade futures or options under the Commodity Exchange Act. A contract market can allow both institutional and retail participants and can list for trading futures contracts on any commodity, provided that each contract is not readily susceptible to manipulation. Also called Designated Contract Market. See Derivatives Transaction Execution Facility.

Contract Month: See Delivery Month.

Contract Size: The actual amount of a commodity represented in a contract.

Contract Unit: See Contract Size.

Corner: (1) Securing such relative control of a commodity that its price can be manipulated, that is, can be controlled by the creator of the corner; or (2) in the extreme situation, obtaining contracts requiring the delivery of more commodities than are available for delivery. See Squeeze, Congestion.

Correction: A temporary decline in prices during a bull market that partially reverses the previous rally. See Bear Market Rally.

Counterparty: The opposite party in a bilateral agreement, contract, or transaction. In the retail foreign exchange (or forex) context, the party to which a retail customer sends its funds; lawfully, the party must be one of those listed in Section 2(c)(2)(B)(ii)(I)-(VI) of the Commodity Exchange Act.

Counterparty Risk: The risk associated with the financial stability of the party entered into contract with. Forward contracts impose upon each party the risk that the counterparty will default, but futures contracts executed on a designated contract market are guaranteed against default by the clearing organization.

Counter-Trend Trading: In technical analysis, the method by which a trader takes a position contrary to the current market direction in anticipation of a change in that direction.

Cover: (1) Purchasing futures to offset a short position (same as Short Covering); see Offset, Liquidation; (2) to have in hand the physical commodity when a short futures sale is made, or to acquire the commodity that might be deliverable on a short sale.

Cross-Hedge: Hedging a cash market position in a futures or option contract for a different but price-related commodity.

Daily Price Limit: The maximum price advance or decline from the previous day's settlement price permitted during one trading session, as fixed by the rules of an exchange.

Day Ahead: See Next Day.

Day Trader: A trader, often a person with exchange trading privileges, who takes positions and then offsets them during the same trading session prior to the close of trading.

Dealer: An individual or firm that acts as a market maker in an instrument such as a security or foreign currency.

Delivery: The tender and receipt of the actual commodity, the cash value of the commodity, or of a delivery instrument covering the commodity (e.g., warehouse receipts or shipping certificates), used to settle a futures contract. See Notice of Delivery, Delivery Notice.

Delivery, Current: Deliveries being made during a present month. Sometimes current delivery is

Derivative: A financial instrument, traded on or off an exchange, the price of which is directly dependent upon (i.e., "derived from") the value of one or more underlying securities, equity indices, debt instruments, commodities, other derivative instruments, or any agreed upon pricing index or arrangement (e.g., the movement over time of the Consumer Price Index or freight rates). Derivatives involve the trading of rights or obligations based on the underlying product, but do not directly transfer property. They are used to hedge risk or to exchange a floating rate of return for fixed rate of return. Derivatives include futures, options, and swaps. For example, futures contracts are derivatives

Diesel fuel: A fuel composed of distillates obtained in petroleum refining operation or blends of such distillates with residual oil used in motor vehicles. The boiling point and specific gravity are higher for diesel fuels than for gasoline.

Directional (deviated) well: A well purposely deviated from the vertical, using controlled angles to reach an objective location other than directly below the surface location. A directional well may be the original hole or a directional "sidetrack" hole that deviates from the original bore at some point below the surface. The new footage associated with directional "sidetrack" holes should not be confused with footage resulting from remedial sidetrack drilling. If there is a common bore from which two or more wells are drilled, the

first complete bore from the surface to the original objective is classified and reported as a well drilled. Each of the deviations from the common bore is reported as a separate well.

Discount: (1) The amount a price would be reduced to purchase a commodity of lesser grade; (2) sometimes used to refer to the price differences between futures of different delivery months, as in the phrase "July at a discount to May," indicating that the price for the July futures is lower than that of May.

Distillate fuel oil: A general classification for one of the petroleum fractions produced in conventional distillation operations. It includes diesel fuels and fuel oils. Products known as No. 1, No. 2, and No. 4 diesel fuel are used in on-highway diesel engines, such as those in trucks and automobiles, as well as off-highway engines, such as those in railroad locomotives and agricultural machinery. Products known as No. 1, No. 2, and No. 4 fuel oils are used primarily for space heating and electric power generation.

No. 1 Distillate: A light petroleum distillate that can be used as either a diesel fuel (see No. 1 Diesel Fuel) or a fuel oil. See No. 1 Fuel Oil.

No. 1 Diesel Fuel: A light distillate fuel oil that has distillation temperatures of 550 degrees Fahrenheit at the 90-percent point and meets the specifications defined in ASTM Specification D 975. It is used in high-speed diesel engines, such as those in city buses and similar vehicles. See No. 1 Distillate above.

No. 1 Fuel Oil: A light distillate fuel oil that has distillation temperatures of 400 degrees Fahrenheit at the 10-percent recovery point and 550 degrees Fahrenheit at the 90-percent point and meets the specifications defined in ASTM Specification D 396. It is used primarily as fuel for portable outdoor stoves and portable outdoor heaters. See No. 1 Distillate above.

No. 2 Distillate: A petroleum distillate that can be used as either a diesel fuel (see No. 2 Diesel Fuel definition below) or a fuel oil. See No. 2 Fuel oil below.

No. 2 Diesel Fuel: A fuel that has distillation temperatures of 500 degrees Fahrenheit at the 10-percent recovery point and 640 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 975. It is used in high-speed diesel engines, such as those in railroad locomotives, trucks, and automobiles. See No. 2 Distillate above.

Low Sulfur No. 2 Diesel Fuel: No. 2 diesel fuel that has a sulfur level no higher than 0.05 percent by weight. It is used primarily in motor vehicle diesel engines for on-highway use.

High Sulfur No. 2 Diesel Fuel: No. 2 diesel fuel that has a sulfur level above 0.05 percent by weight.

No. 2 Fuel oil (Heating Oil): A distillate fuel oil that has distillation temperatures of 400 degrees Fahrenheit at the 10-percent recovery point and 640 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 396. It is used in atomizing type burners for domestic heating or for moderate capacity commercial/industrial burner units. See No. 2 Distillate above.

No. 4 Fuel: A distillate fuel oil made by blending distillate fuel oil and residual fuel oil stocks. It conforms with ASTM Specification D 396 or Federal Specification VV-F-815C and is used extensively in industrial plants and in commercial burner installations that are not equipped with preheating facilities. It also includes No. 4 diesel fuel used for low- and medium-speed diesel engines and conforms to ASTM Specification D 975.

No. 4 Diesel Fuel and No. 4 Fuel Oil: See No. 4 Fuel above.

Dry natural gas: Natural gas which remains after: 1) the liquefiable hydrocarbon portion has been removed from the gas stream (i.e., gas after lease, field, and/or plant separation); and 2) any volumes of nonhydrocarbon gases have been removed where they occur in sufficient quantity to render the gas unmarketable. Note: Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute. Also see **Natural gas**.

Dry natural gas production: The process of producing consumer-grade natural gas. Natural gas withdrawn from reservoirs is reduced by volumes used at the production (lease) site and by processing losses. Volumes used

at the production site include (1) the volume returned to reservoirs in cycling, repressuring of oil reservoirs, and conservation operations; and (2) gas vented and flared. Processing losses include (1) nonhydrocarbon gases (e.g., water vapor, carbon dioxide, helium, hydrogen sulfide, and nitrogen) removed from the gas stream; and (2) gas converted to liquid form, such as lease condensate and plant liquids. Volumes of dry gas withdrawn from gas storage reservoirs are not considered part of production. Dry natural gas production equals marketed production less extraction loss.

Economically Deliverable Supply: That portion of the deliverable supply of a commodity that is in position for delivery against a futures contract, and is not otherwise unavailable for delivery. For example, Treasury bonds held by long-term investment funds are not considered part of the economically deliverable supply of a Treasury bond futures contract.

Efficient Market: In economic theory, an efficient market is one in which market prices adjust rapidly to reflect new information. The degree to which the market is efficient depends on the quality of information reflected in market prices. In an efficient market, profitable arbitrage opportunities do not exist and traders cannot expect to consistently outperform the market unless they have lower-cost access to information that is reflected in market prices or unless they have access to information before it is reflected in market prices. See Random Walk.

Electronic Trading Facility: A trading facility that operates by an electronic or telecommunications network instead of a trading floor and maintains an automated audit trail of transactions.

Emergency: Any market occurrence or circumstance which requires immediate action and threatens or may threaten such things as the fair and orderly trading in, or the liquidation of, or delivery pursuant to, any contracts on a contract market.

EIA: The Energy Information Administration. An independent agency within the U.S. Department of Energy that develops surveys, collects energy data, and analyzes and models energy issues. The Agency must meet the requests of Congress, other elements within the Department of Energy, Federal Energy Regulatory Commission, the Executive Branch, its own independent needs, and assist the general public, or other interest groups, without taking a policy position. See more information about EIA at **http://www.eia.doe.gov/neic/aboutEIA/aboutus.htm**

End user: A firm or individual that purchases products for its own consumption and not for resale (i.e., an ultimate consumer).

Equity: As used on a trading account statement, refers to the residual dollar value of a futures or option trading account, assuming it was liquidated at current prices.

Exchange: A central marketplace with established rules and regulations where buyers and sellers meet to trade futures and options contracts or securities. Exchanges include designated contract markets and derivatives transaction execution facilities.

FERC: The Federal Energy Regulatory Commission.

Fictitious Trading: Wash trading, bucketing, cross trading, or other schemes which give the appearance of trading but actually no bona fide, competitive trade has occurred.

Final Settlement Price: The price at which a cash-settled futures contract is settled at maturity, pursuant to a procedure specified by the exchange.

Financial Instruments: As used by the CFTC, this term generally refers to any futures or option contract that is not based on an agricultural commodity or a natural resource. It includes currencies, equity securities, fixed income securities, and indexes of various kinds.

Financial Settlement: Cash settlement, especially for energy derivatives.

Floor Broker: A person with exchange trading privileges who, in any pit, ring, post, or other place provided by an exchange for the meeting of persons similarly engaged, executes for another person any orders for the purchase or sale of any commodity for future delivery.

Floor Trader: A person with exchange trading privileges who executes his own trades by being personally present in the pit or ring for futures trading. See Local.

Forwardation: See Contango.

Forward Contract: A cash transaction common in many industries, including commodity merchandising, in which a commercial buyer and seller agree upon delivery of a specified quality and quantity of goods at a specified future date. Terms may be more "personalized" than is the case with standardized futures contracts (i.e., delivery time and amount are as determined between seller and buyer). A price may be agreed upon in advance, or there may be agreement that the price will be determined at the time of delivery.

Forward Market: The over-the-counter market for forward contracts.

Forward Months: Futures contracts, currently trading, calling for later or distant delivery. See Deferred Futures, Back Months.

Front Month: The Spot or Nearby Delivery Month, the nearest traded contract month. See Back Month.

Front Running: With respect to commodity futures and options, taking a futures or option position based upon non-public information regarding an impending transaction by another person in the same or related future or option. Also known as trading ahead.

FRS: Financial Reporting System Survey (EIA survey).

Fuel switching capability: The short-term capability of a manufacturing establishment to have used substitute energy sources in place of those actually consumed. Capability to use substitute energy sources means that the establishment's combustors (for example, boilers, furnaces, ovens, and blast furnaces) had the machinery or equipment either in place or available for installation so that substitutions could actually have been introduced within 30 days without extensive modifications. Fuel-switching capability does not depend on the relative prices of energy sources; it depends only on the characteristics of the equipment and certain legal constraints.

Fundamental Analysis: Study of basic, underlying factors that will affect the supply and demand of the commodity being traded in futures contracts. See Technical Analysis.

Futures Contract: An agreement to purchase or sell a commodity for delivery in the future: (1) at a price that is determined at initiation of the contract; (2) that obligates each party to the contract to fulfill the contract at the specified price; (3) that is used to assume or shift price risk; and (4) that may be satisfied by delivery or offset.

Futures Price: (1) Commonly held to mean the price of a commodity for future delivery that is traded on a futures exchange; (2) the price of any futures contract.

Gas turbine plant: A plant in which the prime mover is a gas turbine. A gas turbine consists typically of an axial-flow air compressor and one or more combustion chambers where liquid or gaseous fuel is burned and the hot gases are passed to the turbine and where the hot gases expand drive the generator and are then used to run the compressor.

Grades: Various qualities of a commodity.

Haircut: In computing the value of assets for purposes of capital, segregation, or margin requirements, a percentage reduction from the stated value (e.g., book value or market value) to account for possible declines in value that may occur before assets can be liquidated.

Hedge Exemption: An exemption from speculative position limits for bona fide hedgers and certain other persons who meet the requirements of exchange and CFTC rules.

Hedge Fund: A private investment fund or pool that trades and invests in various assets such as securities, commodities, currency, and derivatives on behalf of its clients, typically wealthy individuals. Some Commodity Pool Operators operate hedge funds.

Hedging: Taking a position in a futures market opposite to a position held in the cash market to minimize the risk of financial loss from an adverse price change; or a purchase or sale of futures as a temporary substitute for a cash transaction that will occur later. One can hedge either a long cash market position (e.g., one owns the cash commodity) or a short cash market position (e.g., one plans on buying the cash commodity in the future).

Henry Hub: A natural gas pipeline hub in Louisiana that serves as the delivery point for New York Mercantile Exchange natural gas futures contracts and often serves as a benchmark for wholesale natural gas prices across the U.S.

Historical Volatility: A statistical measure of the volatility of a futures contract, security, or other instrument over a specified number of past trading days.

Implied Volatility: The volatility of a futures contract, security, or other instrument as implied by the prices of an option on that instrument, calculated using an options pricing model.

Instrument: A tradable asset such as a commodity, security, or derivative, or an index or value that underlies a derivative or could underlie a derivative.

Inverted Market: A futures market in which the nearer months are selling at prices higher than the more distant months; a market displaying "inverse carrying charges," characteristic of markets with supply shortages. See Backwardation.

Large Traders: A large trader is one who holds or controls a position in any one future or in any one option expiration series of a commodity on any one exchange equaling or exceeding the exchange or CFTC-specified reporting level.

Last Notice Day: The final day on which notices of intent to deliver on futures contracts may be issued.

Last Trading Day: Day on which trading ceases for the maturing (current) delivery month.

Leverage: The ability to control large dollar amounts of a commodity or security with a comparatively small amount of capital.

Limit (Up or Down): The maximum price advance or decline from the previous day's settlement price permitted during one trading session, as fixed by the rules of an exchange. In some futures contracts, the limit may be expanded or removed during a trading session a specified period of time after the contract is locked limit. See Daily Price Limit.

Limit Move: See Locked Limit.

Liquidation: The closing out of a long position. The term is sometimes used to denote closing out a short position, but this is more often referred to as covering. See Cover, Offset.

Liquid Market: A market in which selling and buying can be accomplished with minimal effect on price.

Local: An individual with exchange trading privileges who trades for his own account, traditionally on an exchange floor, and whose activities provide market liquidity. See Floor Trader, E-Local.

Long: (1) One who has bought a futures contract to establish a market position; (2) a market position that obligates the holder to take delivery; (3) one who owns an inventory of commodities. See Short.

Long Hedge: See Buying Hedge.

Manipulation: Any planned operation, transaction, or practice that causes or maintains an artificial price. Specific types include corners and squeezes as well as unusually large purchases or sales of a commodity or

security in a short period of time in order to distort prices, and putting out false information in order to distort prices.

Margin: The amount of money or collateral deposited by a customer with his broker, by a broker with a clearing member, or by a clearing member with a clearing organization. The margin is not partial payment on a purchase. Also called Performance Bond. (1) Initial margin is the amount of margin required by the broker when a futures position is opened; (2) Maintenance margin is an amount that must be maintained on deposit at all times. If the equity in a customer's account drops to or below the level of maintenance margin because of adverse price movement, the broker must issue a margin call to restore the customer's equity to the initial level. See Variation Margin. Exchanges specify levels of initial margin and maintenance margin for each futures contract, but Futures Commission Merchants may require their customers to post margin at higher levels than those specified by the exchange. Futures margin is determined by the SPAN margining system, which takes into account all positions in a customer's portfolio.

Market Maker: A professional securities dealer or person with trading privileges on an exchange who has an obligation to buy when there is an excess of sell orders and to sell when there is an excess of buy orders. By maintaining an offering price sufficiently higher than their buying price, these firms are compensated for the risk involved in allowing their inventory of securities to act as a buffer against temporary order imbalances. In the futures industry, this term is sometimes loosely used to refer to a floor trader or local who, in speculating for his own account, provides a market for commercial users of the market. Occasionally a futures exchange will compensate a person with exchange trading privileges to take on the obligations of a market maker to enhance liquidity in a newly listed or lightly traded futures contract. See Specialist System.

Mark-to-Market: Part of the daily cash flow system used by US futures exchanges to maintain a minimum level of margin equity for a given futures or option contract position by calculating the gain or loss in each contract position resulting from changes in the price of the futures or option contracts at the end of each trading session. These amounts are added or subtracted to each account balance.

Maturity: Period within which a futures contract can be settled by delivery of the actual commodity.

Mcf: One thousand cubic feet.

Methane: A colorless, flammable, odorless hydrocarbon gas (CH_4) which is the major component of natural gas. It is also an important source of hydrogen in various industrial processes. Methane is a greenhouse gas. See also **Greenhouse gases**.

MMbbl/d: One million barrels of oil per day.

MMBtu: One million British thermal units.

MMcf: One million cubic feet.

Narrow-Based Security Index: In general, the Commodity Exchange Act defines a narrow-based security index as an index of securities that meets one of the following four requirements (1) it has nine or fewer components; (2) one component comprises more than 30 percent of the index weighting; (3) the five highest weighted components comprise more than 60 percent of the index weighting, or (4) the lowest weighted components comprising in the aggregate 25 percent of the index's weighting have an aggregate dollar value of average daily volume over a six-month period of less than $50 million ($30 million if there are at least 15 component securities). However, the legal definition in Section 1a(25) of the CEA contains several exceptions to this provision. See Broad-Based Security Index, Security Future.

National Futures Association (NFA): A self-regulatory organization whose members include Futures Commission Merchants, Commodity Pool Operators, Commodity Trading Advisors, Introducing Brokers, commodity exchanges, commercial firms, and banks, that is responsible—under CFTC oversight—for certain aspects of the regulation of FCMs, CPOs, CTAs, IBs, and their Associated Persons, focusing primarily on the qualifications and proficiency, financial condition, retail sales practices, and business

conduct of these futures professionals. NFA also performs arbitration and dispute resolution functions for industry participants.

Nearbys: The nearest delivery months of a commodity futures market.

Nearby Delivery Month: The month of the futures contract closest to maturity; the front month or lead month.

Net Position: The difference between the open long contracts and the open short contracts held by a trader in any one commodity.

NYMEX: the New York Mercantile Exchange (NYMEX).

NYMEX Swap: A lookalike swap that is based on a futures contract traded on the New York

Off Exchange: See Over-the-Counter.

Off peak gas: Gas that is to be delivered and taken on demand when demand is not at its peak.

On peak: Periods of relatively high system demand. These periods often occur in daily, weekly, and seasonal patterns; these on-peak periods differ for each individual electric utility.

Opening Price (or Range): The price (or price range) recorded during the period designated by the exchange as the official opening.

Opening: The period at the beginning of the trading session officially designated by the exchange during which all transactions are considered made "at the opening."

Open Interest: The total number of futures contracts long or short in a delivery month or market that has been entered into and not yet liquidated by an offsetting transaction or fulfilled by delivery. Also called Open Contracts or Open Commitments.

Option: A contract that gives the buyer the right, but not the obligation, to buy or sell a specified quantity of a commodity or other instrument at a specific price within a specified period of time, regardless of the market price of that instrument. Also see Put and Call.

Over-the-Counter (OTC): The trading of commodities, contracts, or other instruments not listed on any exchange. OTC transactions can occur electronically or over the telephone. Also referred to as Off-Exchange.

Pork Bellies: One of the major cuts of the hog carcass that, when cured, becomes bacon.

Position: An interest in the market, either long or short, in the form of one or more open contracts.

Position Limit: See Speculative Position Limit.

Prearranged Trading: Trading between brokers in accordance with an expressed or implied agreement or understanding, which is a violation of the Commodity Exchange Act and CFTC regulations.

Price Discovery: The process of determining the price level for a commodity based on supply and demand conditions. Price discovery may occur in a futures market or cash market.

Price Movement Limit: See Limit (Up or Down).

Primary Market: (1) For producers, their major purchaser of commodities; (2) to processors, the market that is the major supplier of their commodity needs; and (3) in commercial marketing channels, an important center at which spot commodities are concentrated for shipment to terminal markets.

Probable energy reserves: Estimated quantities of energy sources that, on the basis of geologic evidence that supports projections from proved reserves (see definition below), can reasonably be expected to exist and be recoverable under existing economic and operating conditions. Site information is insufficient to establish with confidence the location, quality, and grades of the energy source. Note: This term is equivalent to "Indicated Reserves" as defined in the resource/reserve classification contained in the U.S.

Geological Survey Circular 831, 1980. Measured and indicated reserves, when combined, constitute demonstrated reserves.

Production capacity: The amount of product that can be produced from processing facilities.

Program Trading: The purchase (or sale) of a large number of stocks contained in or comprising a portfolio. Originally called program trading when index funds and other institutional investors began to embark on large-scale buying or selling campaigns or "programs" to invest in a manner that replicates a target stock index, the term now also commonly includes computer-aided stock market buying or selling programs, and index arbitrage.

Prompt Date: The date on which the buyer of an option will buy or sell the underlying commodity (or futures contract) if the option is exercised.

Proved energy reserves: Estimated quantities of energy sources that analysis of geologic and engineering data demonstrates with reasonable certainty are recoverable under existing economic and operating conditions. The location, quantity, and grade of the energy source are usually considered to be well established in such reserves. *Note:* This term is equivalent to "Measured Reserves" as defined in the resource/reserve classification contained in the U.S. Geological Survey Circular 831, 1980. Measured and indicated reserves, when combined, constitute demonstrated reserves.

Public: In trade parlance, non-professional speculators as distinguished from hedgers and professional speculators or traders.

Public utility: Enterprise providing essential public services, such as electric, gas, telephone, water, and sewer under legally established monopoly conditions.

Quotation: The actual price or the bid or ask price of either cash commodities or futures contracts.

Rally: An upward movement of prices.

Random Walk: An economic theory that market price movements move randomly. This assumes an efficient market. The theory also assumes that new information comes to the market randomly. Together, the two assumptions imply that market prices move randomly as new information is incorporated into market prices. The theory implies that the best predictor of future prices is the current price, and that past prices are not a reliable indicator of future prices. If the random walk theory is correct, Technical Analysis cannot work.

Recoverable proved reserves: The proved reserves of natural gas as of December 31 of any given year are the estimated quantities of natural gas which geological and engineering data demonstrates with reasonable certainty to be recoverable in the future from known natural oil and gas reservoirs under existing economic and operating conditions.

Recoverable reserves: The amount of coal that can be recovered (mined) from the coal deposits at active producing mines as of the end of the year.

Reporting Level: Sizes of positions set by the exchanges and/or the CFTC at or above which commodity traders or brokers who carry these accounts must make daily reports about the size of the position by commodity, by delivery month, and whether the position is controlled by a commercial or non-commercial trader. See CFTC Backgrounder: The CFTC's Large Trader Reporting System.

Reserve: That portion of the demonstrated reserve base that is estimated to be recoverable at the time of determination. The reserve is derived by applying a recovery factor to that component of the identified coal resource designated as the demonstrated reserve base.

Reserve additions: The estimated original, recoverable, salable, and new proved reserves credited to new fields, new reservoirs, new gas purchase contracts, amendments to old gas purchase contracts, or purchase of gas reserves in-place that occurred during the year and had not been previously reported. Reserve additions refer to domestic in-the-ground natural gas reserve additions and do not refer to interstate pipeline purchase agreements; contracts with foreign suppliers: coal gas, SNG or LNG purchase arrangements.

Risk/Reward Ratio: The relationship between the probability of loss and profit. This ratio is often used as a basis for trade selection or comparison.

Roll-Over: A trading procedure involving the shift of one month of a straddle into another future month while holding the other contract month. The shift can take place in either the long or short straddle month. The term also applies to lifting a near futures position and re-establishing it in a more deferred delivery month.

Rotary rig: A machine used for drilling wells that employs a rotating tube attached to a bit for boring holes through rock.

Round Trip Trading: See Wash Trading.

Rules: The principles for governing an exchange. In some exchanges, rules are adopted by a vote of the membership, while in others, they can be imposed by the governing board.

Securities and Exchange Commission (SEC): The Federal regulatory agency established in 1934 to administer Federal securities laws.

Self-Regulatory Organization (SRO): Exchanges and registered futures associations that enforce financial and sales practice requirements for their members. See Designated Self-Regulatory Organizations.

Short: (1) The selling side of an open futures contract; (2) a trader whose net position in the futures market shows an excess of open sales over open purchases. See Long.

Short Covering: See Cover.

Short Hedge: See Selling Hedge.

Short Selling: Selling a futures contract or other instrument with the idea of delivering on it or offsetting it at a later date.

Short Squeeze: See Squeeze.

Shut in: Closed temporarily; wells and mines capable of production may be shut in for repair, cleaning, inaccessibility to a market, etc.

Small Traders: Traders who hold or control positions in futures or options that are below the reporting level specified by the exchange or the CFTC.

Soft: (1) A description of a price that is gradually weakening; or (2) this term also refers to certain "soft" commodities such as sugar, cocoa, and coffee.

Spark Spread: The differential between the price of electricity and the price of natural gas or other fuel used to generate electricity, expressed in equivalent units. See Gross Processing Margin.

Speculator: In commodity futures, an individual who does not hedge, but who trades with the objective of achieving profits through the successful anticipation of price movements.

Spot: Market of immediate delivery of and payment for the product.

Spot Commodity: (1) The actual commodity as distinguished from a futures contract; (2) sometimes used to refer to cash commodities available for immediate delivery. See Actuals or Cash Commodity.

Spot market (natural gas): A market in which natural gas is bought and sold for immediate or very near-term delivery, usually for a period of 30 days or less. The transaction does not imply a continuing arrangement between the buyer and the seller. A spot market is more likely to develop at a location with numerous pipeline interconnections, thus allowing for a large number of buyers and sellers. The Henry Hub in southern Louisiana is the best known spot market for natural gas.

Spot Month: The futures contract that matures and becomes deliverable during the present month. Also called Current Delivery Month.

Spot Price: The price at which a physical commodity for immediate delivery is selling at a given time and place. See Cash Price.

Spread (or Straddle): The purchase of one futures delivery month against the sale of another futures delivery month of the same commodity; the purchase of one delivery month of one commodity against the sale of that same delivery month of a different commodity; or the purchase of one commodity in one market against the sale of the commodity in another market, to take advantage of a profit from a change in price relationships. The term spread is also used to refer to the difference between the price of a futures month and the price of another month of the same commodity. A spread can also apply to options. See Arbitrage.

Squeeze: A market situation in which the lack of supplies tends to force shorts to cover their positions by offset at higher prices. Also see Congestion, Corner.

Straddle: (1) See Spread; (2) an option position consisting of the purchase of put and call options having the same expiration date and strike price.

Storage additions: Volumes of gas injected or otherwise added to underground natural gas reservoirs or liquefied natural gas storage.

Storage withdrawals: Total volume of gas withdrawn from underground storage or from liquefied natural gas storage over a specified amount of time.

STRIPS (Separate Trading of Registered Interest and Principal Securities): A book-entry system operated by the Federal Reserve permitting separate trading and ownership of the principal and coupon portions of selected Treasury securities. It allows the creation of zero coupon Treasury securities from designated whole bonds.

Strong Hands: When used in connection with delivery of commodities on futures contracts, the term usually means that the party receiving the delivery notice probably will take delivery and retain ownership of the commodity; when used in connection with futures positions, the term usually means positions held by trade interests or well-financed speculators.

Sunk cost: Part of the capital costs actually incurred up to the date of reserves estimation minus depreciation and amortization expenses. Items such as exploration costs, land acquisition costs, and costs of financing can be included.

Swap: In general, the exchange of one asset or liability for a similar asset or liability for the purpose of lengthening or shortening maturities, or raising or lowering coupon rates, to maximize revenue or minimize financing costs. This may entail selling one securities issue and buying another in foreign currency; it may entail buying a currency on the spot market and simultaneously selling it forward. Swaps also may involve exchanging income flows; for example, exchanging the fixed rate coupon stream of a bond for a variable rate payment stream, or vice versa, while not swapping the principal component of the bond. Swaps are generally traded over-the-counter.

Systematic Risk: Market risk due to factors that cannot be eliminated by diversification.

Systemic Risk: The risk that a default by one market participant will have repercussions on other participants due to the interlocking nature of financial markets. For example, Customer A's default in X market may affect Intermediary B's ability to fulfill its obligations in Markets X, Y, and Z.

Technical Analysis: An approach to forecasting commodity prices that examines patterns of price change, rates of change, and changes in volume of trading and open interest, without regard to underlying fundamental market factors. Technical analysis can work consistently only if the theory that price movements are a Random Walk is incorrect. See Fundamental Analysis.

Trader: (1) A merchant involved in cash commodities; (2) a professional speculator who trades for his own account and who typically holds exchange trading privileges.

Trading Ahead: See Front Running.

Transaction: The entry or liquidation of a trade.

Underlying Commodity: The cash commodity underlying a futures contract. Also, the commodity or futures contract on which a commodity option is based, and which must be accepted or delivered if the option is exercised.

Volatility: A statistical measurement of the rate of price change of a futures contract, security, or other instrument underlying an option. See Historical Volatility, Implied Volatility.

Volume of Trade: The number of contracts traded during a specified period of time. It may be quoted as the number of contracts traded or as the total of physical units, such as bales or bushels, pounds or dozens.

Wash Sale: See Wash Trading.

Wash Trading: Entering into, or purporting to enter into, transactions to give the appearance that purchases and sales have been made, without incurring market risk or changing the trader's market position. The Commodity Exchange Act prohibits wash trading. Also called Round Trip Trading, Wash Sales.

Weather Derivative: A derivative whose payoff is based on a specified weather event, for example, the average temperature in Chicago in January. Such a derivative can be used to hedge risks related to the demand for heating fuel or electricity.

Wellhead: The point at which the crude (and/or natural gas) exits the ground. Following historical precedent, the volume and price for crude oil production are labeled as "wellhead," even though the cost and volume are now generally measured at the lease boundry. In the context of domestic crude price data, the term "wellhead" is the generic term used to reference the production site or lease property.

Wellhead price: The value at the mouth of the well. In general, the wellhead price is considered to be the sales price obtainable from a third party in an arm's length transaction. Posted prices, requested prices, or prices as defined by lease agreements, contracts, or tax regulations should be used where applicable.

Yield Curve: A graphic representation of market yield for a fixed income security plotted against the maturity of the security. The yield curve is positive when long-term rates are higher than short-term rates.

Yield to Maturity: The rate of return an investor receives if a fixed income security is held to maturity.